UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

EPA United States Environmental Protection Agency Office of Pesticide Programs

MEMORANDUM

4/13/2020

SUBJECT: Product Chemistry Review for **T-Bone** EPA Reg. No.: **777-RGO**

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TO: Jacqueline Hardy, PM Team 34 / Lorena Rivas
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Registrant: Reckitt Benckiser LLC
Action code: A540
Agency Due Date: 4/20/2020
DP No.: 455640
Submission No.: 1042514
E-Sub No.: 43866
Classification: EP
Process: Integrated system
Pesticide type: Antimicrobial

MRID(s):50968100, 50968101, 50968102, 50968103, 50968104, 50968105, 50968106, and 50968107

Formulation from label			
PC code(s)	CAS #(s)	Active Ingredient(s)	% weight
021801	77-92-9	Citric acid	2.78
		Other Ingredients	97.22
		Total	100.00

I. BACKGROUND

The Registrant, Reckitt Benckiser LLC, has submitted an application for pesticide registration for their product: T-Bone EPA Reg. No. 777-RGO.

II. RELEVANT DOCUMENTS

	RECEIVED	N/A
EPA FORM 8570-1 – Application for Pesticide - Registration (10/25/2019)	☒	☐
EPA FORM 8570-27 – Formulator's Exemption Statement (10/24/2019)*	☐	☒
EPA FORM 8570-34 – Certification with Respect to Citation of Data (10/24/2019)	☒	☐
EPA FORM 8570-35 – Data Matrix (10/24/2019)	☒	☐
EPA FORM 8570-36 – Summary of the Physical/Chemical Data (undated)	☒	☐
EPA FORM 8570-37 – Self-Certification Statement for the Summary of the Physical/Chemical Data (10/24/2019)	☒	☐
Cover letter (10/25/2019)	☒	☐
Transmittal document (10/25/2019)	☒	☐
Proposed CSF BASIC and ALTERNATE 1-22, (October 24, 2019 (updated March 31, 2020)	☒	☐
Proposed label, (10/24/2019)	☐	☐
Certification for Pilot Fragrance Notification Program (for 19 fragrances)	☒	☐
	☐	☐
REFERENCED: CSF	--	
Comments: *Note: Formulator's Exemption Statement is not applicable because product is produced by an integrated system (unregistered active ingredient).		

III. FINDINGS

a. Product Formulation:

	TGAI	MUP	EUP	Food use	Non-food use
Non-integrated	☐	☐	☐	☐	☐
Integrated	☐	☐	☒	☐	☒

Active Ingredients(s)	Nominal	Upper limit	Lower limit
Citric acid	2.78	3.00	2.64
	YES	**NO**	**N/A**
1. The certified limits of all ingredients are within 40 CFR standard certified limits.	☐	☒	
2. Wider certified limits were requested and rationale was accepted.	☒	☐	☐
3. The nominal concentration(s) of the active ingredient is in agreement with the label.	☒	☐	
4. The chemical IDs and analytical information for density, pH, and flammability are consistent with Series 830 Group B data.	☒	☐	
5. All inert ingredients are approved for non-food use pesticide formulations.	☒	☐	☐
6. The impurities present >0.1% are identified.	☐	☐	☒
7. Impurities of toxicological significance have an upper certified limit.	☐	☐	☒

b. Product Label:

	Yes	**NO**	**N/A**
The formula contains one of the following:			
1. 10% or more of petroleum distillate	☐	☒	☐
2. 1.0% or more of methyl alcohol	☐	☒	☐
3. Sodium nitrite at any level	☐	☒	☐
4. A toxic list 1 inert at any level	☐	☒	☐
5. Arsenic in any form	☐	☒	☐
6. If yes to 1-5, then the inert ingredient list contains a relevant footnote	☐	☒	☐
7. Appropriate warning statements regarding flammability or explosive characteristics of the product are included on the label	☐	☐	☒
8. The storage and disposal instructions for the pesticide container are in compliance with PR Notice 84-1 for household use products or PR Notice 83-3 for all other uses.	☒	☐	☐
9. The product requires an expiration date at which time the nominal concentration falls below the lower certified limit.	☐	☐	☒

IV. Additional Findings

1. All of the Fragrance Supplier's Statements (when Supplier knows fragrance identity) certify all of the ingredients found in their fragrance formula to be used in the proposed product EPA File Symbol 770-RGO are listed in the Fragrance Ingredient List (FIL) and meet the terms of the Fragrance Notification Program.
2. The Registrant Statement (when Registrant does not know fragrance identity) is used for all fragrances herein and meets the terms of the OPP Fragrance Notification Program.
3. Wider upper certified limits for the active ingredient was provided and found acceptable.
4. Basic and Alternate 1-22 CSFs are dated as "October 24, 2019 (updated March 31, 2020)" and found acceptable.
5. Group A product chemistry data requirements applicable to end-use product have been met (see MRID 50968101 on Table A below).
6. Group B product chemistry data requirements applicable to end-use product have been met (see MRID 50968102, 50968103, and 50968107 and EPA Form 8570-36 (undated) on Table B below).

V. Conclusion

The Product Science Branch of Antimicrobials Division finds Group A and B Product Chemistry Data requirements have been met. Basic and Alternate 1-22 CSFs are dated as "October 24, 2019 (updated March 31, 2020)" and found acceptable.

VI. Table A:
Series 830 guidelines – Group A

OPPTS#	Name	Status	MRID
830.1550	Product Identity & Composition	Acceptable	50968101
830.1600	Description of materials	Acceptable	50968101
830.1620	Description of production process	Acceptable	50968101
830.1650	Description of formulation process	Acceptable	50968101
830.1670	Discussion of formation of impurities	Acceptable	50968101
830.1700	Preliminary analysis	Acceptable	50968101
830.1750	Certified limits	Acceptable	50968101
830.1800	Enforcement analytical method	Acceptable	50968101
830.1900	Submittal of samples	Acceptable	50968101

VII. Table B: Series 830 guidelines – Group B

OPPTS#	Name	Study Findings/Comment	Status	MRID
830.6302	Color	Not required for end use product	Not applicable	N/A
830.6303	Physical state	liquid	Acceptable	50968102 50968103 & EPA Form 8570-36
830.6304	Odor	Not required for end use product	Not applicable	N/A
830.6313	Stability to normal & elevated temperatures, metals & metal ions	The product is not TGAI	Not applicable	N/A
830.6314	Oxidation/Reduction	*Results are shown below this table, in Table: Chemical Incompatibility	Acceptable	50968102 50968103 & EPA Form 8570-36
830.6315	Flammability	No flash point observed.	Acceptable	50968102 50968103 & EPA Form 8570-36
830.6316	Explodability	Product does not contain any known explosive material and is not expected to explode.	Acceptable	50968102 & EPA Form 8570-36
830.6317	Storage stability (14 Day Accelerated)	Average at initial – 2.77% Average at 2 weeks, 54°C - 2.94% The active ingredient concentrations lie within the range of the certified limits.	Acceptable	50968102 50968107 & EPA Form 8570-36
830.6319	Miscibility	Product is not an emulsion and is not diluted with petroleum solvents.	Acceptable	50968102 & EPA Form 8570-36
830.6320	Corrosion characteristics (14 Day Accelerated)	There was no evidence of corrosion on the lids, liners, seams or sides of the container.	Acceptable	50968102 50968107 & EPA Form 8570-36

830.6321	Dielectric breakdown voltage	Product is not intended to be used around electrical equipment.	Acceptable	50968102 & EPA Form 8570-36
830.7000	pH	2.26	Acceptable	50968102 50968103 & EPA Form 8570-36
830.7050	UV/Visible absorption	Not required for MUP or EP	Not applicable	N/A
830.7100	Viscosity	Kinematic – 1.106 Centistokes Dynamic - 1.121 Centipoise	Acceptable	50968102 50968103 & EPA Form 8570-36
830.7200	Melting point	Not required for MUP or EP	Not applicable	N/A
830.7220	Boiling point	Not required for MUP or EP	Not applicable	N/A
830.7300	Density/relative	1.0137 g/ml	Requires upgrading	50968102 50968103 & EPA Form 8570-36
830.7370	Dissociation constants in water	Not required for MUP or EP	Not applicable	N/A
830.7520	Particle size	Not required for MUP or EP	Not applicable	N/A
830.7550/ 7560/ 7570	Partition coefficient	Not required for MUP or EP	Not applicable	N/A
830.7840/ 7860	Water solubility	Not required for MUP or EP	Not applicable	N/A
830.7950	Vapor pressure	Not required for MUP or EP	Not applicable	N/A

TABLE: CHEMICAL INCOMPATABILITY*

Material	Test Substance: T-Bone e0143-1668			
	Initial Temperature (°C)	Temperature **after addition of reactant (°C)**	Initial Observations/ Reaction	Final Observations/ Reaction
Water (Reactivity Evaluation with Water)	21.9	21.9	No change	No change
Monoammonium **phosphate** (Reactivity with Fire Extinguishing Agents)	21.9	19.9	Change in color to opaque white	Two layers formed; an opalescent top layer and a colorless bottom layer
Turpentine (Chemicals Intended for Household Use)	21.9	21.9	Immiscible, no reaction	Immiscible, no reaction
Zinc (For Reducing Agents)	21.9	21.9	Change in color to a light grey, partially dissolved	Zinc settled to the bottom of the tube, liquid turned light grey
Potassium Permanganate (For Oxidizing agents)	21.9	21.9	Change in color to amber	Change in color to a colorless liquid

Pages 9 -157 *Confidential Appendix May be Subject to Confidential Treatment*